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Persistent Pain after Abdominal Section.

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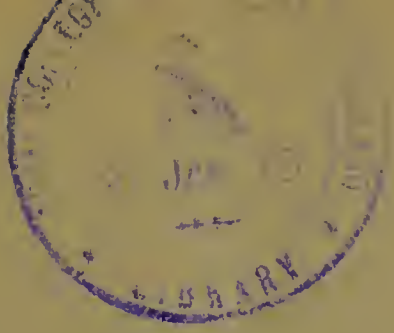

PERSISTENT PAIN AFTER ABDOMINAL SECTION.

BY JAMES B. HUNTER, M. D.,
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The title of this paper has been suggested chiefly by cases in which the serious operation of abdominal section has been performed directly for the relief of pain. In many doubtful cases of disease of the ovaries and tubes, pain, either constant or periodical, is the prominent symptom—the one feature—which determines the surgeon in advising operation, and the patient in submitting to it. If that pain is not permanently relieved, the operation, whatever may be its actual value, is unsuccessful, so far as the patient is concerned.

In order to understand the causes of pain *after* operation, we must consider first the causes of pain *before* operation, which may be placed, for purposes of study, under two heads, viz., those referable to diseases of the ovaries and tubes, and those due to diseases of the peritoneum.

1. Pain due to diseases of the ovaries and tubes may be further divided as follows:

a. Pain due to disease of the ovary itself, which manifests itself usually at the menstrual period. If continuous, it is apt to be much increased in severity at or immediately before the period. This form of pain has among its causes excessive congestion of the ovary before and during menstruation, and thickening of the cortex, in consequence of chronic ovaritis, whereby the Graafian follicle is prevented from discharging freely. This condition of the cortex I

have several times verified by the microscopical examination of ovaries removed in consequence chiefly of excessive dysmenorrhea. There are probably other changes in the condition of the ovary which have thus far escaped detection, but which would abundantly explain the vague form of pain known as "ovarian neuralgia." When we remember how rich is the nervous supply of the ovary, and how close its connection with the sympathetic system, we shall not be surprised to find it the seat of many "reflex neuroses."

b. Diseases of the tube are responsible for pain in a large number of cases. The disease may be pyo-salpinx, hydro-salpinx, haemato-salpinx, or the so-called catarrhal salpingitis. The latter term is applied rather vaguely in cases where the tube is simply congested. There is difficulty in drawing the line between the normal congestion of the tube and incipient inflammation of that organ. I have been accustomed to consider it more probable that salpingitis was beginning, in cases where a much congested tube was found in connection with an ovary entirely free from congestion or engorgement. Where both ovary and tube have been congested, I have often been at a loss to form a definite opinion, or to obtain one from the pathologists. In either case, it is quite possible that pain may result from congestion of the tube, since it also has a rich nervous and vascular supply. Distention of the tube from any cause may easily occasion severe pain, especially if it provokes vermiform movements that make traction on the ovary. In several cases in which I looked for it, I have seen a free discharge of pus from the cervix simultaneously with relief from intense ante- or post-menstrual pain. This discharge is often described by the patient as occurring in "gushes." Pain may occur in the left tube, when it is prolapsed from the pressure of a distended rectum.

c. Pain may be caused by prolapse of the ovaries and tubes, or from prolapse of one ovary and tube. This condition is usual in pyo-salpinx. It is in consequence of the prolapse that we are enabled by vaginal examination to

make out the shape and size of the diseased tube or tubes. There are several reasons why pain results from this dislocation: There is necessarily dragging on the broad ligaments and adjacent parts; there is exposure of the diseased tubes to mechanical injury and irritation from a loaded rectum, from coitus, and sometimes from the use of pessaries. Intense and lasting pain is often caused by a single vaginal examination.

2. Pain due to peritonitis is of so much importance in connection with abdominal operations, that it may properly be considered separately, though in fact it does often co-exist with the diseases above mentioned. Acute peritonitis may be limited strictly to the region of the ovaries and tubes. This may occur at regular intervals, corresponding with the menstrual periods, subsiding or becoming passive in the intervals. The initial cause of such inflammation may be the escape of the contents of a tube containing pus, by rupture or otherwise. Subsequent attacks may be due to the breaking up of delicate adhesions consequent on the first attack. In some cases there would appear to be a fresh escape of pus at each menstrual period, with corresponding pain. There is often little, if any, rise of temperature. The peculiarity of this form of peritonitis is its periodicity.

In the subacute peritonitis there is constant pain, with some elevation of temperature and general disturbance. There is more rapid decline in health, and the patient readily sinks into a state of invalidism. Pathologically, there is shown to be congestion, with recent adhesions, and sometimes circumscribed collections of pus. This condition is commonly mistaken for pelvic cellulitis, which it is not; nor can such small collections of pus be looked upon as pelvic abscesses.

The third, or chronic, form of peritonitis is characterized by numerous firm adhesions, in which are imbedded firmly the tubes and ovaries. It is constantly observed, that, while the existence of pyo-salpinx provokes the occurrence of peritoneal inflammation, no such result follows in hydro-salpinx.

Peritoneal adhesions, from whatever cause, are a fruitful source of pain, which they cause—

a. By so surrounding and compressing the tubes and ovaries that they have not room to enlarge during the monthly congestion.

b. By preventing the exercise of their proper functions—the escape of ova.

c. By continual traction upon exceedingly sensitive parts.

d. By interrupting the circulation of the blood in the pelvic plexus, thus causing chronic congestion.

e. By direct pressure or traction exerted on certain nerves, as in cicatricial tissue elsewhere. This may be assumed from analogy, but has not been demonstrated.

f. By traction on other organs, especially the intestines. If the bladder is empty and the uterus forward, coils of small intestine gravitate into the pouch of Douglas. These coils are displaced upward, as the bladder fills and the uterus rises. Now, if adhesions interfere with the mobility of the intestines severe pain will result. If the adhesions are unyielding, pain will be caused by the vermicular movements of the intestine itself, and the pain may be as constant as the movement. In like manner, adhesions to the rectum will give rise to severe pain during defecation. Peritoneal inflammation may of course involve any or all of the pelvic viscera, and the resulting pain will be in proportion to the kind and extent of the adhesions consequent. A very severe form of pain is caused by permanent displacement of the uterus; but in this connection a mere allusion to so broad a subject must suffice. We are concerned now with the one symptom—pain, as a result of disease of the pelvic organs, exclusive of malignant disease. For the relief of pain, supposed to be due, we will say, to ovarian or tubal disease, abdominal section is performed. The organs at fault are successfully removed, and the patient makes a good recovery. It may be a case in which both ovaries and tubes are removed, and as the disturbing element of menstruation is eliminated, the patient is encouraged to expect a cure. Three months elapse, and still

the patient suffers, not from the old dysmenorrhea, but from a pain more or less constant. She is encouraged to wait patiently; but in some cases, which have probably occurred to all of us, time brings no relief, and pains of some kind persist, varying perhaps in degree at different times, but never entirely absent. There are a few cases in which the suffering after operation is even greater than it was before. It may be stated in a general way that if, after an operation of the kind in question, there is not marked relief from pain at the expiration of eighteen months or two years, the patient having taken proper care of herself and been favorably situated, the operation may be pronounced a failure, as far as the patient is concerned. It is certainly interesting, and it may be instructive, to inquire into the causes of such failures. The pain may be due, we shall find—

I. To the former peritonitis.

II. To peritonitis following the operation.

III. To some defect in the abdominal wound.

I. If, as we have seen to be more than probable, localized attacks of pelvic peritonitis are due to the existence of pyo-salpinx, the removal of the diseased tubes must prevent the attacks which recur with each menstrual epoch; but it does not necessarily remove the consequences of past inflammation, or restore the normal relations of the injured and displaced viscera. For this reason pain is often not relieved by operation. I believe that, if the subsequent history could be obtained of all the patients who are simply "discharged cured" after Tait's operation, it would be found that many of them, though radically cured of a disease that might endanger life, still suffer pain long after they have passed out of sight. I have made a point for some years past of following up all cases in which I had a right or could obtain permission to do so, in order to satisfy myself of the completeness or permanency of the cure, or the reverse. In connection with the presence of a certain amount of peritonitis, the question arises, whether the disease of the tubes may not sometimes be secondary to the local peritoneal inflammation.

In some cases, it is evident that the tubes were first occluded by peritoneal adhesions, and afterward became distended with pus. In such cases, it is not reasonable to expect a cure to follow the removal of the diseased tubes. The same is true of cases where from any cause there is an almost impenetrable mass of adhesions, including the tubes and ovaries. I have more than once had to abandon the attempt to extricate from such a mass the tube that was supposed to be the cause of all the inflammation. These adhesions may be so dense that the ovaries and tubes can not be distinguished or dissected out, even post-mortem. The removal of the tubes or ovaries by operation in such cases offers no prospect of relief commensurate with the danger to which the patient is subjected.

II. Peritonitis following operation is the cause of pain in a certain number of cases. A slight amount of peritonitis, limited in extent, often occurs after abdominal section. Though causing very little disturbance at the time, and subsiding in a few hours, it may, nevertheless, leave some slight adhesions, sufficient to interfere with the perfect mobility of the viscera. The more extensive and severe the peritonitis, the greater the danger of subsequent adhesions. Dr. H. C. Coe, pathologist to the Woman's Hospital, informs me that he has often found, post-mortem, peritoneal inflammation beginning at the stump or tied portion of the pedicle. Firm adhesions resulting from peritonitis cause pain by preventing the normal mobility of the pelvic viscera, by pressure on nerves, by interfering with the circulation, and sometimes by constricting the intestines and diminishing their caliber. In one fatal case of ovariotomy, occurring in my practice in the Woman's Hospital, there was complete occlusion of the intestine, which was surrounded by bands of lymph. The acute peritonitis had subsided, and but for the obstruction the patient would probably have recovered. Patients do undoubtedly recover from peritonitis (following operation) extensive enough to cause firm and lasting adhesions. The inflammation in the region of the stump is often enough to

attach it to the abdominal wall, and pain then results from traction. It often happens that the uterus is fixed in an abnormal position, so that there is traction on the bladder, and frequent painful micturition. I have under observation a patient who suffers so much, and constantly, from dysuria, that she declares she would willingly go back to her old dysmenorrhea, which was intense, if she could be relieved of her present distress. It happens, probably rarely, that the intestine becomes attached by inflammation to the abdominal wall in the line of the incision. I had the opportunity of seeing this condition in a case on which I did a second operation (the first had been done by a distinguished member of this Society) for the relief of agonizing intestinal pain. The operation was quite in vain. I made my incision about an inch to the right of the first wound, which was in the median line. Immediately beneath the original wound the intestine was seen to be firmly glued to the peritoneal line, which it covered in its whole extent, while it was quite free from adhesions on its opposite side. The remaining ovary and tube were removed, as a possible source of pain, but though the patient recovered well from the operation she was in no wise benefited thereby.

III. Pain may result from a defective union of the abdominal wound, permitting the occurrence of ventral hernia. There may be union of the peritoneum and integument only, in which case the pressure of the contents of the abdomen causes much distress. Pain in the cicatrix may occur here as elsewhere. Abscesses in the region of the wound generally occur, if at all, during the first two weeks, and are the cause of severe pain. They may, however, develop long afterward, as one of the sequela of septicemia, or in patients whose condition is not good; and they may occur at almost any period, from a portion of retained suture, or any foreign body that may have become imbedded in the wound.

PROPHYLAXIS.—The utmost precaution should be taken to prevent the development of peritonitis in cases where it does not exist, and to limit and restrict it if it already exists.

Especial care should be taken to do no violence to the intestines where they are unavoidably exposed, and they should be protected and kept warm. On replacing them, they should be carefully covered by the omentum. Antiseptic precautions should be rigidly observed in every particular. As the stump has been shown to constitute a focus of inflammation, it should be ligated with aseptic silk which has not been exposed or handled after preparation. Hemorrhage should be guarded against with the greatest care. If drainage-tubes are used, they should have no perforations, and they should be gently moved and rotated from time to time. The early and judicious use of drainage and irrigation goes far toward the prevention of peritonitis. In all cases the bowels should be moved as early as the third day, preferably by enemata. If, in spite of all preventive measures, there are symptoms of peritonitis, the cold coil should be resorted to, together with the use of antipyrin, if the temperature is rising. The abdominal wound should be closed with the greatest care, the peritoneum being closed first and separately whenever it is practicable. The method of performing this part of the operation which I have found most satisfactory, was fully set forth in a paper presented to this Society last year.

Treatment.—The treatment of pain from the causes we are now considering is either palliative or radical. The palliative treatment consists of the use of blisters or iodine externally, with hot vaginal injections, alternated with light vaginal tampons of cotton and glycerin, or the boro-glyceride. The internal use of opium or some equivalent is demanded in most cases; indeed, the frequency with which it is necessary to resort to narcotics in bad cases of pelvic pain constitutes one of the great dangers in this form of disease. While some relief is afforded by the local treatment referred to, it is very difficult to see how such measures can make much impression on firm peritoneal adhesions or cicatricial nodules. The careful packing of the vagina may help to keep up a displaced uterus so long as it is movable, and the elastic sup-

port gives the patient a sense of comfort in standing or walking. Absolute rest, in the horizontal position, is of itself of more value than all other treatment together, provided proper nutrition is maintained at the same time.

Radical Treatment.—If all practicable measures for relief have been fairly and patiently tried, and if twelve or eighteen months have elapsed, and there is no improvement, but rather the reverse, a second operation may be warranted. The danger of operative interference, and the uncertainty whether, in case the patient survives the operation, she will be any better, should of course be frankly stated. If the patient prefers the risk to the apparent prospect of becoming a chronic and helpless invalid, or, perhaps, the slave of some narcotic drug, an exploratory incision should be made. In one case of severe intestinal pain I was able to detach a loop of intestine from the fundus of the uterus, thus affording relief that amply justified the operation. In another case of firm adhesions following peritonitis, the adherent coils of intestine could be so far liberated as to afford considerable though not permanent relief. But such cases merely suggest possibilities. As a rule, it is impossible to separate the adhesions, and if separated they are prone to reunite. Fresh peritonitis is likely to follow any violence, and may result from very slight disturbance. Too often the operator has to be content with exploration only, and loses no time in closing the incision. In such cases both surgeon and patient have the satisfaction of knowing that nothing has been left undone that might have afforded relief or cure.

It would have added to the value of this imperfect sketch of the subject to have incorporated details of a number of typical cases, of which I have notes, and to have given the results of autopsies and microscopical examinations of specimens, but they might have carried the paper to a tedious length. As it stands, I feel warranted in drawing the following conclusions:

I. That all cases of abdominal section done for the relief of pain should be carefully followed up and observed, or

made the subject of inquiry, for at least two years from the time of operation, and not counted as cured because the operation itself does not prove fatal.

II. That peritonitis in any degree after operation is to be dreaded as much for its remote consequences as for the immediate danger it threatens.

III. That extreme caution is demanded as to undertaking operations where the history or the physical condition points to the existence of chronic peritonitis.

IV. That secondary operations, though sometimes justifiable, are generally of no avail; that they only occasionally afford temporary relief, and very rarely effect a cure.

V. That a guarded prognosis should be made in all cases of abdominal section done especially for the relief of pain; that the patient should be made fully aware that there are certain chances, which it is impossible to calculate, that a perfect cure may not result from even the most successful operation.